

IN THE CLAIMS

This listing of the claim will replace all prior versions and listings of claim in the present application.

Listing of Claims

1. (currently amended) An address translator for connecting to be coupled to a first network conforming to a first addressing system, and to be coupled to a second network conforming to a second addressing system, said address translator comprising:

an address translating unit which translates, in a Layer 3 region of communication data, function for translating a Layer 3 address of conforming to the first addressing system into to a Layer 3 address of conforming to the second addressing system, or vice versa translates, in a Layer 3 region of communication data, a Layer 3 address of the second addressing system into a Layer 3 address of the first addressing system; and

a detecting unit which detects that the function for detecting communication data conforms conforming to a particular protocol based on at least information on a port number contained in a header corresponding to a Layer 4 region of the communication data; and

a creating unit which creates translation information including a correspondence relationship between the Layer 3 address of the first addressing system and the Layer 3 address of the second addressing system for translating a Layer 3 address contained in a region of the communication data higher than the Layer 3 region, when the detecting unit detects that the communication data conforms to the particular protocol.

— wherein said address translator translates, by said address translation function, a Layer 3 address described in a Layer 3 header of the communication data, and

— wherein when said address translator detects said communication data conforming to said particular protocol, said address translator creates translation information including a correspondence relationship between a Layer 3 address in the first addressing system and a Layer 3 address in the second addressing system for translating a Layer 3 address described in a region higher than Layer 3 of the communication data.

2. (currently amended) The address translator according to claim 1, further comprising:

a communicating means for communicating with a server device,

wherein said address translator sends said translation information and the region of the communication data higher than the Layer 3 region of the ~~communication data~~ to said server device, and receives information including said Layer 3 address described in the region of the communication data higher than the Layer 3 region which has been translated by said server device.

3. (currently amended) The address translator according to claim 1, further comprising:

a processing part for translating said Layer 3 address described in the region of the communication data higher than the Layer 3 region of the ~~communication data~~.

4. (currently amended) A message processing method, comprising:

~~translating, by performing first translation processing for translating, in a Layer 3 region of a message, to translate a Layer 3 address of the message from information conforming to a first addressing system to information conforming to a second addressing system;~~

~~detecting, by performing detection processing, for detecting that to detect that the a-message conforming conforms to a particular protocol based on at least information on a port number contained in a header corresponding to a Layer 4 region of the message; and~~

~~when the address translator detects that the a-message, which conforming conforms to the particular protocol, is detected by the step of performing detection processing, creating translation information for translating a Layer 3 address described in a region higher than Layer 3 of the message, including a correspondence relationship between the Layer 3 address of the first addressing system and the Layer 3 address of the second addressing system for translating a Layer 3 address contained in a region of the communication data higher than the Layer 3 region.~~

5. (currently amended) The message processing method according to claim 4, further comprising:

using a first server and a second server;

performing said first translation processing in said first server;

transferring the translation information and the region of the message higher than the Layer 3 region of the message from said first server to said second server;

extracting, by said second server, a parameter which requires the translation from said region of the message higher than the Layer 3 region of the message;

performing second translation processing ~~for translating which~~ translates said Layer 3 address described in the region of the message higher than the Layer 3 region of the message on said extracted parameter in said second server; and

transferring the information in said region of the message higher than the Layer 3 region of the message which has undergone said second translation processing from said second server to said first server.

6. (currently amended) The message processing method according to claim 5, wherein said second server has a table indicative of parameters in the region of the message higher than the Layer 3 region of the message which require the translation, and extracts the parameter which requires the translation from said region of the message higher than the Layer 3 region of the message based on said table.

7. (currently amended) The message processing method according to claim 5, wherein said first server transfers the parameter which requires the translation together, with a tag added thereto, in said region of the message higher than the Layer 3 region of the message to said second server, and

wherein said second server extracts the parameter which requires the translation from said region of the message higher than the Layer 3 region of the message-based on said tag.

8. (currently amended)The message processing method according to claim 4, wherein said region of the message higher than the Layer 3 region of the message-is a payload including a Session Initiation Protocol (SIP) message.

Claims 9-19 (canceled).

20. (currently amended)The address translator according to claim 2, wherein said region of the communication data higher than the Layer 3 region of the communication data comprises parameter which requires translation of the region of the communication data higher than the Layer 3 region of the communication data.

21. (currently amended)The address translator according to claim 20, wherein said address translator sends the region of the communication data higher than the Layer 3 region of the communication data with a tag added to said parameter by said address translator,

wherein said server device extracts the parameter which requires the translation from the region of the communication data higher than the Layer 3 region of the communication data based on said tag which requires the

translation of the region of the communication data higher than the Layer 3 region of the communication data.

22. (currently amended) The address translator according to claim 1, wherein in case of that the first addressing system is Internet Protocol Version 4 (IPv4), the second addressing system is Internet Protocol Version 6 (IPv6), and

wherein in case of that the first addressing system is IPv6 and the second addressing system is IPv4.

23. (currently amended) The message processing method according to claim 4, wherein in case of that the first addressing system is Internet Protocol Version 4 (IPv4), the second addressing system is Internet Protocol Version 6 (IPv6), and

wherein in case of that the first addressing system is IPv6, the second addressing system is IPv4.

Claim 24 (canceled).

25. (currently amended) An address translating system comprising:

an address translator; and

a server device, which are is connected to a first network conforming to a first address system and a second network conforming to a second addressing system,

wherein the address translator comprises:

an address translating unit which translates means for translating, in a Layer 3 region of communication data, a Layer 3 address of conforming to the first addressing system to into a Layer 3 address of conforming to the second addressing system, or translating, in a Layer 3 region of communication data, vice versa a Layer 3 address of the second addressing system into a Layer 3 address of the first addressing system; and

a detecting unit which detects means for a detecting that the communication data conforming conforms to a particular protocol based on at least information on a port number contained in a header corresponding to a Layer 4 region of the communication data; and

creating unit which creates means for creating translation information including a correspondence relationship between the Layer 3 address of the first addressing system and the Layer 3 address of the second addressing system for translating a Layer 3 address contained in a region of the communication data higher than the Layer 3 region, when the detecting means detects that the communication data conforms to the particular protocol.

—— wherein the address translator, by the address translating means, a Layer 3 address described in a Layer 3 header of the communication data, and

—— wherein when the address translator detects a communication data conforming to the particular protocol, the address translator creates translation information including a correspondence relationship between a Layer 3 address in the first addressing system and a Layer 3 address in the

second addressing system for translating a Layer 3 address described in a region higher than Layer 3 of the communication data.

26. (currently amended) The address translating system according to claim 25, wherein the address translator further comprises:

a communicating means for communicating with the server device, wherein the address translator sends the translation information and the region of the communication data higher than the Layer 3 region of the communication data to the server device, and receives information including the Layer 3 address described in the region of the communication data higher than the Layer 3 region which has been translated by the server device.

27. (currently amended) The address translating system according to claim 26, wherein the server device receives the translation information and the region of the communication data higher than the Layer 3 region of the communication data from the address translator, and translates the Layer 3 address conforming to the first addressing system described in the region of the communication data higher than the Layer 3 region of the communication data to a Layer 3 address conforming to the second addressing system based on the translation information, and sends information including the Layer 3 address described in the region of the communication data higher than the Layer 3 region which has been translated by the server device.

28. (currently amended) The address translating system according to claim 25, wherein the region of the communication data higher than the Layer 3 region ~~of the communication data~~, which is sent from the address translator to the server device, comprises:

parameter which requires translation of the region of the communication data higher than the Layer 3 region of the communication data.

29. (currently amended) The address translating system according to claim 28, wherein the address translator sends the region of the communication data higher than the Layer 3 region ~~of the communication data~~ with a tag added to the parameter which requires the translation of the region of the communication data higher than the Layer 3 region ~~of the communication data~~,

wherein the server device extracts the parameter which requires the translation from the region of the communication data higher than the Layer 3 region ~~of the communication data~~ based on the tag.

30. (currently amended) The address translating system according to claim 25, wherein in the case of that the first addressing system is Internet Protocol Version 4 (IPv4), the second addressing system is Internet Protocol Version 6 (IPv6), and

wherein in the case of that the first addressing system is IPv6, the second addressing system is IPv4.

31. (previously presented) The address translating system according to claim 25, wherein the particular protocol is a Session Initiation Protocol (SIP).

32. (new) The address translator according to claim 1, wherein the port number is described in a Transport layer as Layer 4.

33. (new) The address translator according to claim 1, wherein the port number is described by Transmission Control Protocol (TCP) as Layer 4.

34. (new) The address translator according to claim 1, wherein the port number is described by User Datagram Protocol (UDP) as Layer 4.

35. (new) The address translator according to claim 1, wherein the port number is an identifier indicating that the region of the communication data higher than the Layer 3 region is described by Session Initiation Protocol (SIP).

36. (new) The address translator according to claim 1, wherein at least a portion of the region of the communication data higher than the Layer 3 region is described by Session Initiation Protocol (SIP) and includes the Layer 3 address.

37. (new) The message processing method according to claim 4, wherein the port number is described in a Transport layer as Layer 4.

38. (new) The message processing method according to claim 4, wherein the port number is described by Transmission Control Protocol (TCP) as Layer 4.

39. (new) The message processing method according to claim 4, wherein the port number is described by User Datagram Protocol (UDP) as Layer 4.

40. (new) The message processing method according to claim 4, wherein the port number is an identifier indicating that the region of the communication data higher than the Layer 3 region is described by Session Initiation Protocol (SIP).

41. (new) The message processing method according to claim 4, wherein at least a portion of the region of the communication data higher than the Layer 3 region is described by Session Initiation Protocol (SIP) and includes the Layer 3 address.

42. (new) The address translating system according to claim 25, wherein the port number is described in a Transport layer as Layer 4.

43. (new) The address translating system according to claim 25, wherein the port number is described by Transmission Control Protocol (TCP) as Layer 4.

44. (new) The address translating system according to claim 25, wherein the port number is described by User Datagram Protocol (UDP) as Layer 4.

45. (new) The address translating system according to claim 25, wherein the port number is an identifier indicating that the region of the communication data higher than the Layer 3 region is described by Session Initiation Protocol (SIP).

46. (new) The address translating system according to claim 25 wherein at least a portion of the region of the communication data higher than the Layer 3 region is described by Session Initiation Protocol (SIP) and includes the Layer 3 address.